Tachogenerators

Shaft ø7-14 mm with flange

With own bearings

TDP 0,2

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Features

- **High response speed**
- **Open circuit voltage 10...150 mV per rpm**
- **Shaft ø7-14 mm with flange**
- **Top signal quality over the total rotational speed range by patented Longlife technique**
- **Recognition of sense of rotation**
- **No auxiliary energy source required**

Optional

- **Two separate tacho voltages (TDPZ 0,2)**
- **Second shaft end**
- **Combined with centrifugal switch FSL**

Technical data - electrical ratings

Reversal tolerance	≤0.1 %
Linearity tolerance	≤0.15 %
Temperature coefficient	±0.05 %/K (open-circuit)
Isolation class	B
Calibration tolerance	±1 %
Climatic test	Humid heat, constant (IEC 60068-2-3, Ca)
Performance	12 W (speed >3000 rpm)
Armature-circuit time-constant	<75 µs
Open-circuit voltage	10...150 mV per rpm

Technical data - mechanical design

Dimensions (flange)	ø90 mm
Shaft	ø7...14 mm
Protection DIN EN 60529	IP 55, IP 56 (option)
Admitted shaft load	≤60 N axial ≤80 N radial
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+130 °C
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 300 g, 1 ms
Weight approx.	2.6 kg
Connection	Terminal box
Torque	1.5...0 Ncm
Rotor moment of inertia	1.1 kgcm²

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Part number

TDP 0,2 LT - ☐

Open-circuit voltage

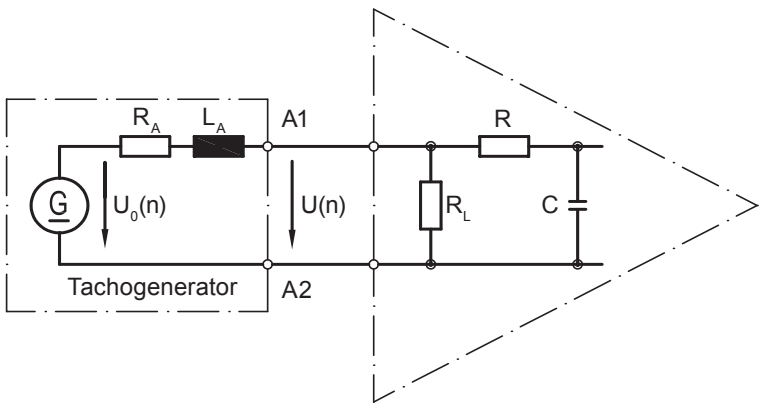
6	10 mV per rpm
7	20 mV per rpm
10	30 mV per rpm
5	40 mV per rpm
4	60 mV per rpm
3	100 mV per rpm
1	150 mV per rpm

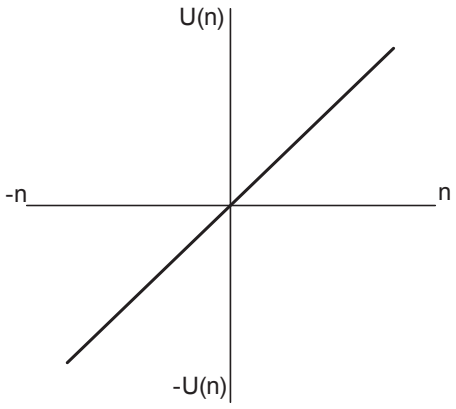
Data according to type

Type	Open-circuit voltage	Minimum load required depending on speed range [rpm]			Maximum operating speed	Armature resistance	Armature inductance
		0 - 3,000	0 - 6,000	0 - n_{max}			
	U_0 [mV/rpm]	R_L [kΩ]	R_L [kΩ]	R_L [kΩ]	n_{max} [rpm]	R_A (20°C) [Ω]	L_A [mH]
TDP 0,2 LT - 6	10	≥0.1	≥0.3	≥0.9	10,000	3	6
TDP 0,2 LT - 7	20	≥0.3	≥1.2	≥3.3	10,000	11	23
TDP 0,2 LT - 10	30	≥0.7	≥2.7	≥7.5	10,000	26	50
TDP 0,2 LT - 5	40	≥1.2	≥5	≥13.5	10,000	47	90
TDP 0,2 LT - 4	60	≥2.7	≥11	≥30	10,000	99	200
TDP 0,2 LT - 3	100	≥7.5	≥30	≥30	6,000	271	550
TDP 0,2 LT - 1	150	≥16	---	≥30	4,000	630	1,260

Superimposed ripple (for τ_{RC} = 0.7 ms): ≤0.5 % (peak-peak) ≤0.2 % (rms)

Replacement switching diagram





$\tau_{RC} \approx R \cdot C$ $\tau_A \approx \frac{L_A}{R_L}$

$U(n) = U_0(n) \frac{R_L}{R_A + R_L} \approx U_0(n)$ for $R > R_L \gg R_A$

Polarity for positive rotating direction: A1: **+** A2: **–** (VDE)

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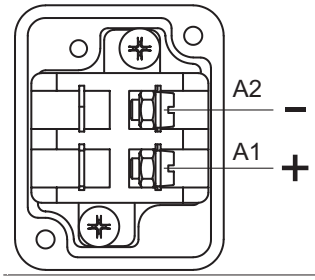
Terminal assignment

View A - Connecting terminal

Polarity for positive direction of rotation



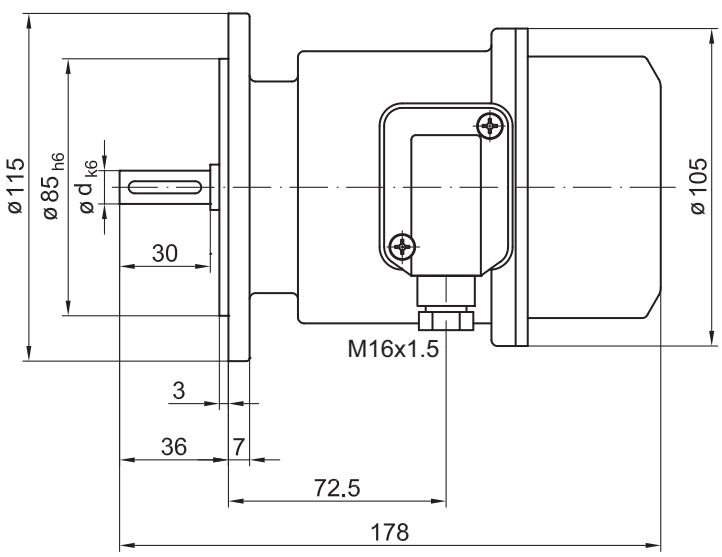
Accessories

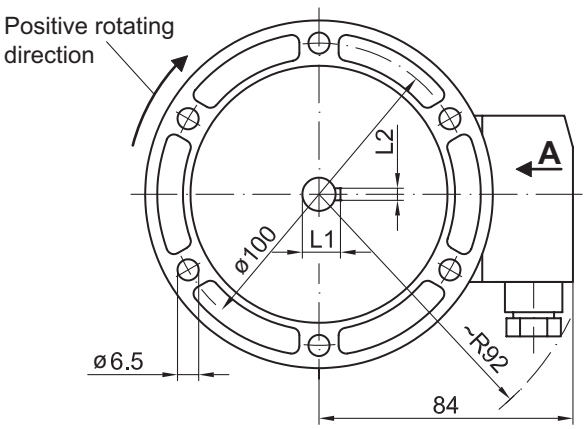
Carbon brushes

Mounting accessories

K 35	Spring disk coupling for shaft ø6...12 mm
K 50	Spring disk coupling for shaft ø11...16 mm
K 60	Spring disk coupling for shaft ø11...22 mm

Dimensions





ød	L1	L2
7	8.3	3
11	12.6	4
14	16.1	5

HM95M23920

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